space severely limits movement of the support member 47 in the direction of the longer axis of the core arrangement 45.

It will be appreciated that the apparatus described above by way of example with reference to FIGS. 3 to 5 and FIG. 8 may easily be modified to permit rotational movement of the support members 33 and 39.

We claim:

1. A whole body magnetic resonance apparatus including a magnet system comprising a magnetic core arrangement having a pair of spaced apart and opposed planar surfaces separated by at least one magnetically susceptible yoke defining an established gap therebetween; means for producing a static magnetic field between said surfaces and in a direction across said gap; said field defining an equilibrium axis of magnetic alignment of nuclei within an object placed in the gap for examination in the apparatus; means for superimposing a gradient magnetic field on said static magnetic field in at least one of three orthogonal directions; means for applying a radio frequency field to said object in said gap; means for detecting a radio frequency field emanating from said object in said gap; means for controlling said static, gradient and applied radio frequency fields in said gap; and an object handling equipment including an object support member of elongated form adapted to support the object for examination and translating means for providing translational movement of the support member into and out of said gap in a plane transverse to the magnetic field direction and in a first direction transverse to the longitudinal axis of said support member, and of an extent sufficient to allow the object on said support member to be moved between a position within said gap and a position wholly outside of said gap such as to avoid interference between the object and the magnetic core arrangement as the object is placed on and removed from said support member.

2. An apparatus according to claim 1 wherein said plane is orthogonal to said magnetic field direction.

3. An apparatus according to claim 1 wherein said translating means comprises means permitting only translational movement in said plane.

4. An apparatus according to claim 1 wherein the examined object is a patient and wherein said support member comprises means arranged to support the patient so that the patient lies horizontally with the head-to-toe axis of the patient parallel to said longitudinal axis of the support member.

5. A magnetic resonance apparatus including a magnet system comprising a magnetic core arrangement having a pair of opposed surfaces with a gap therebetween; and means for producing a magnetic field in said gap; said field defining an equilibrium axis of magnetic alignment of nuclei within an object placed in the gap for examination in the apparatus; means for superimposing a gradient magnetic field on said static magnetic field in at least one of three orthogonal directions; means for applying a radio frequency field to said object in said gap; means for detecting a radio frequency field in the object in said gap; means for controlling said static, gradient and radio frequency fields in said gap; and an object handling equipment including an object support member of elongated form adapted to support an object for examination and translating mean for providing translational movement of the support member into and out of said gap in a plane transverse to the magnetic field direction and in a first direction transverse to the longitudinal axis of said support member,

and of an extent sufficient to allow an object on said support member to be moved between a position within said gap and a position wholly outside of said gap such as to avoid interference between the object and the magnetic core arrangement as the object is placed on and removed from said support member; and wherein said translating means also permits translational movement of the support member in said plane in a second direction at any angle to the first direction transverse to the longitudinal axis of said support member at least when said support member is at a position such that said object is within said gap.

6. An apparatus according to claim 5 further including an underlying member on which said support member is mounted slidably by said translating means for translational movement of said support member with respect to said underlying member in said second direction, and said underlying member is slidably mounted with respect to said core arrangement for movement of said support member in said first direction.

7. An apparatus according to claim 5 further including an underlying member on which said support member is mounted slidably by said translating means for translational movement of said support member with respect to said underlying member both in said first direction and in said second direction.

8. An apparatus according to claim 5 wherein said first and second directions are respectively orthogonal to and parallel to said longitudinal axis.

9. An apparatus according to claim 8 wherein said core arrangement is of rectangular cross-section in planes orthogonal to the direction of said magnetic field and the longer sides of said cross-section are substantially orthogonal to said first direction.

10. An apparatus according to claim 9 further including an underlying member on which said support member is mounted slidably by said translating means for translational movement of said support member with respect to said underlying member in said second direction, and said underlying member is slidably mounted with respect to said core arrangement for movement of said support member in said first direction, and wherein said core arrangement is a four-poster bed core arrangement; said underlying member being arranged to pass between the pair of posts of the core arrangement at opposite ends of the longer side of the core arrangement when slid in said first direction; and said support member being arranged to pass between the pairs of posts of the core arrangement at opposite ends of the shorter sides of the core arrangement when slid in said second direction.

11. An apparatus according to claim 5 further including an underlying member on which said support member is mounted slidably by said translating means for translational movement of said support member with respect to said underlying member both in said first direction and in said second direction; wherein said core arrangement comprises a yoke portion of planar rectangular form having a pair of opposite limbs with said opposed surfaces respectively positioned centrally along said limbs; and said support member is disposed with its longitudinal axis at an acute angle to the lengths of said opposite limbs so as to be capable of passing diagonally through said core arrangement via said gap when undergoing said translational movement in said second direction when in at least one position along said first direction.

12. A magnetic resonance apparatus including a magnet system comprising a magnetic core arrangement having a pair of opposed surfaces with a gap therebetween; and means for producing a magnetic field in said gap; said field defining an equilibrium axis of magnetic alignment of nuclei within an object placed in the gap for examination in the apparatus; means for superimposing a gradient magnetic field on said static magnetic field in at least one of three orthogonal directions; means for applying a radio frequency field to said object in said gap; means for detecting a radio frequency field in the object in said gap; means for controlling said static, gradient and radio frequency fields in said gap; and an object handling equipment including an object support member of elongated form adapted to support an object for examination and translating means for providing translational movement of the support member into and out of said gap in a plane transverse to the magnetic field direction and in a first direction transverse to the longitudinal axis of said support member, and of an extent sufficient to allow an object on said support member to be moved between a position within said gap and a position wholly outside of said gap such as to avoid interference between the object and the magnetic core arrangement as the object is placed on and removed from said support member; including rotating means whereby said support member is also capable of rotational movement about axes normal to said plane.

13. An apparatus according to claim 12 wherein said rotating means includes a first arm and a second arm wherein the support member is pivotally mounted for rotation in said plane at one end of said first arm whose other end is pivotally mounted to one end of said second arm which at its other end is pivotally mounted for rotation about an axis fixed with respect to said core arrangement.

14. In an MRI system including an NMR polarizing magnet having opposed upper and lower horizontal poles defining a MRI image volume within a gap between the poles that is open about at least three sides, the improvement comprising:

a movable patient transport having spaced-apart structures supporting a horizontal patient bed and depending therefrom and defining an opening under the bed sized to pass said lower magnet pole therethrough while interjecting the patient bed into said gap so as to permit substantially adjacent patient access along a side of the patient while the patient is positioned within the MRI image volume.

15. A MRI system as in claim 14 wherein said movable patient transport comprises:

means for moving the patient bed in at least two dimensions with respect to said spaced-apart structures.

16. A method for positioning a patient for MRI using an NMR polarizing magnet with a C-shaped cross-section, said method comprising:

placing said patient on a movable bed having an aperture in an undercarriage disposed below the bed;

moving said bed into said open gap while moving said aperture therebelow over a lower pole face of the magnet thus leaving unobstructed adjacent access to the patient along an entire patient body side while the patient is disposed within said gap.

17. A method as in claim 16 further comprising:

further adjusting the bed position within the gap along at least two dimensions with respect to said undercarriage after the bed has been located within the gap and the undercarriage has been positioned over the lower pole face.